UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,751	12/11/2000	Daniel M. Bartell	3272	4823

7590	06/30/2004

Chief IP Counsel
Affymetrix, Inc.
3380 Central Expressway
Santa Clara, CA 95051

EXAMINER
AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 April 2004</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6,8-15,17-24,26 and 27</u> is/are rejected.

7)☒ Claim(s) <u>7,16 and 25</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>11 December 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

RESPONSE TO AMENDMENT

1.   Applicants' arguments, filed, 4/21/2004, see page 2 through 4, with respect to the rejection of claims 1-27 have been fully considered but they are not persuasive.

2.   Applicants' argues in essence regarding claim 1, Arnold and Syracuse individually or in combination, do not teach, or suggest, "measurement of pixel stutter in said image".

The Examiner disagrees and indicates, "pixel stutter is known in the art as undesired black and white or defective pixel due to artifacts. In response to applicants' argument that reference fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (**two or more adjacent pixels with the same intensity value**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, in response to applicant's argument, regarding claim 1, Syracuse discloses method for improves image quality. The pixels in adjacent scan lines from different views in the slow scan direction cause an effect called "image stutter" which reduces the quality of the images. The edge of each pixel is commonly designated by printer manufacture as some percentage of full intensity. To remove any overlap it is necessary to either space the pixels apart or change the width in the slow scan direction, so that light intensity has fallen below a predetermined threshold (column 4, lines 34-65).

In response to applicants' argument, Arnold teaches the method including the step of setting a pixel intensity search range that corresponds to the expected range of pixel intensities for one of the reference sample images. The steps of evaluating the intensity of pixels adjacent to the detected pixel and analyzing the adjacent pixels having intensities within the search range to determine whether each of the detected pixels have intensities within the search range (not having artifact), (column 6, lines 34-55).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-6, 8-15, 17-24 and 26-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (U.S. patent 4,922,915) in view of Syracuse et al (U.S. patent 5,781,225).

Regarding claim 1, Arnold et al discloses computer implemented method for detecting pixel stutter of a scanner comprising:

obtaining data representing a plurality of pixels using said scanner (column 10, lines 19-29, the image 200 represents a plurality of pixels that each has an intensity that correspond to the X-ray);

obtaining a measurement of pixel stutter in said image (column 6, lines 34-54,

evaluating sufficient number of pixel and column 11, lines 42-58, measuring all pixels

within the boundaries or lie outside of reference);

obtaining a statistical distribution of pixel stutter; and determining whether said

measurement is above what is expected from said statistical distribution (column 28,

line 54 through column 29, line 12, refer to calculating pixels and distribution which is

well defined).

However Arnold et al is silent about "measurement of pixel stutter in said image

". On the other hand Syracuse et al teaches (column 4, lines 29-43, the pixels in

adjacent scan line from different views in the slow scan direction cause an effect called

image stutter).

Therefore it would have been obvious to one having ordinary skill in the art at the

time of the invention was made, to modify Arnold et al invention according to the

teaching of Syracuse et al because it providing scanning direction to reduce image

ambiguity and remove overlap in pixels which can implement in scanning device for

efficiency and quality of desire image.

Regarding claim 2, Arnold et al discloses the method of Claim 1 wherein said

measurement of pixel stutter is time correlated (column 29, lines 30-45, refer to time

and pixel evaluation).

Regarding claim 3, Arnold et al discloses the method of Claim 2 wherein said

image has a plurality of rows and columns of pixels, wherein said scanner obtains said

image row by row and wherein said measurement of pixel stutter is row stuttered pixel

count (Fig. 10 and 11, column 12, lines 65 through column 13, lines5, refer to rows and columns).

Regarding claim 5, Arnold et al discloses the method of Claim 4 wherein said statistical distribution is measured by column stuttered pixel count (Fig. 14, column 19, lines 5-23, calculation of pixels in column).

Regarding claim 6, Arnold et al discloses the method of Claim 5 wherein said determining comprises comparing row stuttered pixel count and column stuttered pixel count (column 17, lines comparing the pixels).

Regarding claim 9, Arnold et al discloses the method of Claim 8 further comprising displaying stuttered pixels overlaid on said image (Fig. 1, column 10, lines 19-29, display or video monitor).

Regarding claim 10, Arnold et al discloses a computer software product for detecting pixel stutter of a scanner comprising: computer program code for obtaining data representing a plurality of pixels using said scanner; computer program code for obtaining a measurement of pixel stutter in said image; computer program code for obtaining a statistical distribution of pixel stutter; computer program code for determining whether said measurement is above what is expected from said statistical distribution; and a computer readable media for storing said codes (see claim 1 and column 26, lines 39-43, source code which implements the above aspect).

Regarding claim 19, Arnold et al discloses a system for detecting pixel stutter of a scanner comprising: a processor; and a memory coupled to the processor, the

memory capable of storing a plurality machine instructions that cause the processor to perform a plurality of logical

steps when implemented by the processor, said logical steps including: obtaining data representing a plurality of pixels using said scanner; obtaining a measurement of pixel stutter in said image; obtaining a statistical distribution of pixel stutter; and determining whether said measurement is above what is expected from said statistical distribution (see claim 1 and column 29, lines 30-45, refer to memory array).

Regarding claims 4, 13 and 14, it recites similar limitation as claim 1, are similarly analyzed.

Regarding claims 11-12, 20-21, 23 and 26, it recites similar limitation as claims 2 and 3, are similarly analyzed.

Regarding claims 8, 15, 17, 22 and 24, it recites similar limitation as claims 1, 6, and 10, are similarly analyzed.

Regarding claims 18 and 27, it recites similar limitation as claim 9, are similarly analyzed.

Allowable Subject Matter

5.   Claims 7, 16 and 25, are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

Conclusion

6.   **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded

of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Seyed Azarian whose telephone number is (703) 306-

5907. The examiner can normally be reached on Monday through Thursday from 6:00

a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application information Retrieval (PAIR) system. Status information for published

application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see http:// pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian

Patent Examiner

Group Art Unit 2625

June 20, 2004

BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600